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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,654	01/11/2002	Bradley S. Levin	4189-PA3	9399

7590 10/03/2003  
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EXAMINER

PETKOVSEK, DANIEL J

ART UNIT	PAPER NUMBER
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2874

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/044,654

Applicant(s)

LEVIN ET AL.

Examiner

Daniel J Petkovsek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on amendment filed on July 14, 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-13, 15-21 and 23-27 is/are rejected.
- 7) ☒ Claim(s) 5, 14, and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on July 14, 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: Brian Healy

### **DETAILED ACTION**

This office action is in response to the amendment filed on July 14, 2003. In accordance with the amendment, claims 1, 10, and 18 have been amended; and new claims 26 and 27 have been added.

#### ***Drawings***

1. The drawings were received on July 14, 2003. These drawings are acknowledged for the content of reference number 24. It is acknowledged that formal drawings will be filed when the application is allowed.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 8, 26, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Gilliland et al. U.S.P. No. 5,815,623.

Gilliland et al. U.S.P. No. 5,815,623 teaches (Figs. 6A, 7) a radially symmetrical optoelectronic module comprising: a symmetrical (around the optical axis) ferrule 500 defining an axial opening along an optical axis and having first and second ends positioned along the optical axis, a lens assembly held by holder 500 along the optical axis, the first end of the ferrule to receive an optical fiber adjacent to the lens, and an optoelectronic device 518 affixed to the second end of ferrule 500, in a second structural component. Gilliland teaches (Fig. 3, column 8 line 60 through column 9 line 55) an

elongated radially symmetric lens assembly 141, having a central opening to fit a lens and having projecting ribs 141, the assembly engaged in the ferrule.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-4, 6, 7, 9-13, 15-21, and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilliland et al. U.S.P. No. 5,815,623.

Gilliland et al. U.S.P. No. 5,815,623 teaches (Figs. 6A, 7) a radially symmetrical optoelectronic module comprising: a symmetrical (around the optical axis) ferrule 500 defining an axial opening along an optical axis and having first and second ends positioned along the optical axis, a lens assembly held by holder 500 along the optical axis, the first end of the ferrule to receive an optical fiber adjacent to the lens, and an optoelectronic device 518 affixed to the second end of ferrule 500, in a second structural component. Gilliland teaches (Fig. 3, column 8 line 60 through column 9 line 55) an elongated radially symmetric lens assembly 141, having a central opening to fit a lens and having projecting ribs 141, the assembly engaged in the ferrule. Gilliland et al. '623 does not explicitly teach that a sleeve formed of a resilient material is outside the ferrule, frictionally engaged over the outside of the ferrule, to further connect the ferrule to a housing. Gilliland et al. '623 does not explicitly teach that a two lens system exists in

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which a second lens directs light onto the optoelectronic component mounted at the second end of the module.

Regarding claims 2-4, 11-13, and 19-21, it is well known in the art to use sleeves outside ferrules (fiber holders) for the purpose of further connecting these modules to housings in order for protection. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to attach a frictional sleeve to the outside of the ferrule holding member 500 for the purpose of further housing the optical module for protection from any outside force that would interfere with the coupling of the optical signal from the optical fiber through the lens system to the optoelectronic device.

Regarding claims 9, 10, 17, 18, and 25, using a second lens near the optoelectronic component for the purpose of improving coupling to the device is an obvious, and well known in the art, modification of the module of Gilliland et al. '623. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use a second lens in the module to improve the coupling efficiency of the module to/from the optoelectronic device

Regarding claims 6, 7, 15, 16, 23, and 24, the formation of the ferrule from metal is an obvious modification at the time the invention was made to a person having ordinary skill in the art for the purpose of including conductivity means for electrical connections throughout the optical module.

***Allowable Subject Matter***

6. Claims 5, 14, and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the

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limitations of the base claim and any intervening claims. The relevant prior art does not teach or reasonably suggest an optical module as claimed with additionally the sleeve and the ferrule including projections for limiting relative axial movement therebetween.

### *Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, with respect to the state of the art of optical alignment modules between fibers and optical devices: PTO-892 form references A and B.

Applicant's arguments filed July 14, 2003, have been considered but are not persuasive.

Applicant traverses the rejection of claims 1 and 8 to Gilliland et al. '623 by stating that '623 does not teach an elongated symmetric lens assembly with a central opening, being frictionally engaged. This lens assembly is described in figure 3 of '623, as fully addressed above.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J Petkovsek whose telephone number is (703) 305-6919. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (703) 308-4819. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 872-9321.



Daniel Petkovsek  
September 11, 2003



Brian Healy  
Primary Examiner